

WHAT IS CLAIMED IS:

1. An endovascular graft comprising:
a graft body section having an inflatable cuff and wherein the inflatable cuff contains a three-component inflation medium.
2. The endovascular graft of claim 1 wherein the inflation medium comprises the combination polyethylene glycol diacrylate, pentaerthritol tetra 3(mercaptopropionate), and a buffer.
3. The endovascular graft of claim 2 wherein the buffer comprises glycylglycine.
4. The endovascular graft of claim 2 wherein the buffer comprises triethanolamine in phosphate-buffered saline.
5. The endovascular graft of claim 2 wherein the polyethylene glycol diacrylate is present in a proportion ranging from about 50 to about 55 weight percent.
6. The endovascular graft of claim 2 wherein the polyethylene glycol diacrylate has a molecular weight ranging from about 350 to about 850.
7. The endovascular graft of claim 2 wherein the pentaerthritol tetra 3(mercaptopropionate) is present in a proportion ranging from about 22 to about 27 weight percent.
8. The endovascular graft of claim 2 wherein the glycylglycine is present in a proportion ranging from about 22 to about 27 weight percent.
9. The endovascular graft of claim 1 wherein the inflation material is radiopaque.
10. The endovascular graft of claim 9 wherein the inflation material comprises a radiopaque material that is soluble in glycylglycine.

11. The endovascular graft of claim 9 wherein the inflation material becomes less radiopaque over time.
12. The endovascular graft of claim 11 wherein the inflation material comprises a radiopaque material comprising a blend of a soluble contrast agent and an insoluble contrast agent.
13. The endovascular graft of claim 1 wherein the soluble contrast agent comprises an iodinated aqueous solution and the insoluble contrast agent comprises barium sulfate.
14. The endovascular graft of claim 1 wherein a post-cure elastic modulus of the inflation medium is between about 175 and about 250 pounds per square inch.
15. The endovascular graft of claim 14 wherein the inflation medium exhibits a cure time between about two minutes and about ten minutes.
16. The endovascular graft of claim 1 wherein the inflation medium additionally comprises saline or other inert biocompatible material.
17. The endovascular graft of claim 16 wherein the inflation medium comprises between about 20 and about 50 percent by volume saline.
18. The endovascular graft of claim 1 wherein the inflation medium comprises polyethylene glycol diacrylate, a thiolated polyethyleneamine, and a buffer.
19. The endovascular graft of claim 1 wherein the inflation medium comprises polyethylene glycol diacrylate, a thiolated tetronic, and a buffer.
20. The endovascular graft of claim 1 wherein the graft body section comprises an inflatable channel in fluid communication with the inflatable cuff.
21. The endovascular graft of claim 20 wherein the inflatable cuff is disposed at a proximal portion of the graft body section and further comprising

a second inflatable cuff disposed at a distal portion of the graft body section and wherein the second inflatable cuff is in fluid communication with the inflatable channel and inflatable cuff.

22. An endovascular graft comprising:

a main body portion having at least one inflatable cuff,

a first bifurcated portion forming a continuous lumen with the main body portion, said lumen configured to confine a flow of fluid therethrough,

at least one inflatable channel extending from the first bifurcated portion to the main body portion,

wherein the inflatable cuff is in fluid communication with the inflatable channel, and

wherein the inflatable channel and inflatable cuff contain a three-component inflation medium.

23. The endovascular graft of claim 22 wherein the inflation medium comprises the combination polyethylene glycol diacrylate, pentaerythritol tetra 3(mercaptopropionate), and a buffer.

24. The endovascular graft of claim 22 wherein the inflation material is radiopaque.

25. The endovascular graft of claim 22 further comprising a second bifurcated portion and wherein the inflatable channel extends to the second bifurcated portion.

26. The endovascular graft of claim 25 wherein the inflatable channel extends to a distal inflatable cuff disposed at a distal portion of one or both of the first and second bifurcated portions, and wherein each of the inflatable channel, at least one inflatable cuff, and distal inflatable cuffs are in fluid communication with each other.

27. A kit for the endovascular delivery of a graft, comprising:

a graft body section having an inflatable cuff,

a three-component inflation medium, and

instructions for use.

28. The kit of claim 27 wherein the graft body section further comprises an expandable member disposed on the graft body section and extending away from a proximal portion thereof.

29. The kit of claim 27 wherein each of the three components of the inflation medium is packaged separately.

30. The kit of claim 27 wherein the graft body section further comprises an inflatable channel in fluid communication with the inflatable cuff.

31. The kit of claim 28 further comprising a second inflatable cuff disposed at a distal portion of the graft body section in fluid communication with the inflatable channel and inflatable cuff.

32. The kit of claim 27 wherein the graft body section comprises a main body portion and at least one bifurcated portion forming a continuous lumen with the main body portion, said lumen configured to confine a flow of fluid therethrough.

33. The kit of claim 27 wherein the instructions for use comprise directions for mixing each of the three components with each other in a particular sequence and for a particular amount of time prior to introducing the three-component mixture into the graft body section inflatable cuff.